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(FILE 'HOME' ENTERED AT 10:29:24 ON 13 AUG 2002)

FILE 'REGISTRY' ENTERED AT 10:29:42 ON 13 AUG 2002

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      E FELIP04/MF
      E LIMNO4P/CN
      E LIMNO4P/MF
      E FELIO4P/MF
      E IRON LITHIUM PHOSPHATE/CN
L1      1 S E12
      E LITHIUM TITANIUM PHOSPHATE/CN
L2      1 S E3
      E LITHIUM NICKEL PHOSPHATE/CN
L3      1 S E6
      E LITHIUM COBALT PHOSPHATE/CN
      E COBALT LITHIUM PHOSPHATE/CN
L4      1 S E3
      E LITHIUM MANGANESE PHOSPHATE/CN
L5      1 S E3
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FILE 'CA' ENTERED AT 10:42:45 ON 13 AUG 2002

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L6      139 S L1-L5

=> s 16 and PY<=1997
      17904842 PY<=1997
L7      53 L6 AND PY<=1997
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=> s 17 and (cathode or electrode or batter###)
      137811 CATHODE
      338006 ELECTRODE
      97948 BATTER###
L8      11 L7 AND (CATHODE OR ELECTRODE OR BATTER###)
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      E LITHIUM COBALT PHOSPHATE/CN
      E COBALT LITHIUM PHOSPHATE/CN
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L4 1 S E3
E LITHIUM MANGANESE PHOSPHATE/CN
L5 1 S E3

FILE 'CA' ENTERED AT 10:42:45 ON 13 AUG 2002

L6 139 S L1-L5
L7 53 S L6 AND PY<=1997
L8 11 S L7 AND (CATHODE OR ELECTRODE OR BATTER###)

=> d ibib ab it 1-

YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L8 ANSWER 1 OF 11 CA COPYRIGHT 2002 ACS
ACCESSION NUMBER: 128:42677 CA
TITLE: Color **cathode** ray tube.
INVENTOR(S): Hashimoto, Noritsuna; Maekawa, Takeyuki; Hoshizaki,
Junichiro; Takahashi, Sadaji
PATENT ASSIGNEE(S): Mitsubishi Electric Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09293463	A2	19971111	JP 1996-105626	19960425 <--

AB A bright and high-contrast color **cathode** ray tube comprises a pigment-powder filter layer having reflectivity bottoms at 460-510 and 560-600 nm powder-reflection spectral regions and a reflectivity peak at a 510-560 nm powder-reflection spectral region. Specifically, the pigment may comprise $(\text{Co}_{1-x}\text{M}_2)_3(\text{PO}_4)_2$, $\text{M}=\text{Li}$, K , and/or Na ; $0.1 \leq x \leq 1/3$, or $(\text{Co}_{1-x}\text{M}_1)_3(\text{PO}_4)_2$, $\text{M}_1=\text{Sr}$, Ca , and/or Ba ; $0.1 \leq x \leq 0.5$.

IT **Cathode** ray tubes
(color; phosphate pigment filter in)

IT Pigments, nonbiological
(filter; in color CRT)

IT 13455-36-2, Cobalt phosphate ($\text{Co}_3(\text{PO}_4)_2$) 13824-63-0, Cobalt lithium phosphate (CoLiPO_4) 199794-96-2, Calcium cobalt phosphate ($\text{Ca}_{0.06}\text{Co}_{2.94}(\text{PO}_4)_2$) 199794-97-3, Cobalt potassium phosphate ($\text{Co}_{2.96}\text{K}_{0.02}(\text{PO}_4)_2$)
RL: DEV (Device component use); NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(pigment filter; color **cathode** ray tube)

L8 ANSWER 2 OF 11 CA COPYRIGHT 2002 ACS
ACCESSION NUMBER: 128:5716 CA
TITLE: **Cathode** materials for secondary alkali metal-ion and lithium-ion **batteries**
INVENTOR(S): Goodenough, John B.; Padhi, Akshaya; Nanjundaswamy, K.

PATENT ASSIGNEE(S): S.: Masquelier, Christian
 SOURCE: Board of Regents, the University of Texas System, USA
 PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9740541	A1	19971030	WO 1997-US6671	19970423 <--
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5910382	A	19990608	US 1997-840523	19970421
EP 904607	A1	19990331	EP 1997-923437	19970423
R: DE, FR, GB, IT				
JP 2000509193	T2	20000718	JP 1997-538259	19970423
US 6391493	B1	20020521	US 1999-298080	19990423
PRIORITY APPLN. INFO.:			US 1996-16060P	P 19960423
			US 1996-32346P	P 19961204
			US 1997-840523	A3 19970421
			WO 1997-US6671	W 19970423
AB	The cathode materials are LiMP ₀₄ , where M is .gtoreq.1 1st-row transition-metal cation; Mn, Fe, Co, and/or Ni; or Fe _{1-x} M _x or Fe _{1-x} Ti _x , where 0 < x < 1. The cathode materials comprise a rhombohedral Nasicon material M ₁ xM ₂ (P ₀₄) ₃ , where M ₁ is Li or Na and x .ltoreq.5.			
IT	Battery cathodes (materials for secondary alkali metal-ion and lithium-ion)			
IT	36058-25-0P, Iron lithium phosphate (Fe ₂ Li ₃ (P ₀₄) ₃) 184241-62-1P 196612-05-2P, Iron lithium niobium phosphate (FeLiNb(P ₀₄) ₃) 198782-43-3P, Lithium vanadium phosphate (LiV ₂ (P ₀₄) ₃) RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses) (cathode materials for secondary lithium-ion batteries)			
IT	15365-14-7, Iron lithium phosphate (LiFeP ₀₄) 196612-01-8, Lithium sodium vanadium phosphate (Li ₂ NaV ₂ (P ₀₄) ₃) 198782-39-7, Iron lithium phosphate (FeLi ₀₋₁ (P ₀₄)) 198782-41-1, Iron lithium phosphate (Fe ₂ Li ₃₋₅ (P ₀₄) ₃) 198782-42-2, Iron lithium phosphate sulfate (Fe ₂ Li ₁₋₃ (P ₀₄)(S ₀₄) ₂) RL: DEV (Device component use); PRP (Properties); USES (Uses) (cathode materials for secondary lithium-ion batteries)			
IT	11123-44-7 59205-70-8 198782-44-4, Lithium niobium titanium phosphate (Li ₀₋₂ NbTi(P ₀₄) ₃) 198782-45-5, Iron lithium niobium phosphate (FeLi ₁₋₃ Nb(P ₀₄) ₃) RL: TEM (Technical or engineered material use); USES (Uses) (cathode materials for secondary lithium-ion batteries)			

L8 ANSWER 3 OF 11 CA COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 127:37234 CA
 TITLE: Nonaqueous electrolyte secondary **batteries**
 with alkali metal-contg. iron mixed oxide cathodes
 INVENTOR(S): Okada, Shigeto; Arai, So; Masashiro, Takahisa; Otsuka,
 Hideaki; Sakurai, Yoji; Yamaki, Junichi
 PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	JP 09134725	A2	19970520	JP 1995-311699	19951107 <--
AB	The battery cathodes contain the Fe mixed oxide $AyFeXO_4$ ($A =$ alkali metal; $X =$ Group IV-VII element, $0 < y < 2$) as an active mass. The mixed oxide preferably has olivine structure with hexagonal closest-packing O skeleton or spinel or reverse spinel structure with cubic closest-packing O skeleton. The batteries have high discharge voltages and high capacity.				
IT	Battery cathodes (nonaq. electrolyte secondary batteries with alkali metal-contg. iron mixed oxide cathodes for discharge voltage and capacity)				
IT	13718-69-9, Iron lithium vanadium oxide ($FeLiVO_4$) 15365-14-7, Iron lithium phosphate ($FeLiPO_4$) 190436-18-1, Iron lithium vanadium oxide phosphate ($FeLiV_0.5O_2(PO_4)_{0.5}$) RL: DEV (Device component use); USES (Uses) (active mass; nonaq. electrolyte secondary batteries with alkali metal-contg. iron mixed oxide cathodes for discharge voltage and capacity)				

L8 ANSWER 4 OF 11 CA COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 127:37233 CA
 TITLE: Nonaqueous electrolyte secondary **batteries**
 with alkali metal-containing phosphate cathodes
 INVENTOR(S): Okada, Shigeto; Arai, So; Masashiro, Takahisa; Otsuka,
 Hideaki; Sakurai, Yoji; Yamaki, Junichi
 PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----

- JP 09134724 A2 19970520 JP 1995-311698 19951107 <--
- AB The **battery** cathodes contain a phosphate compd. AyMP04 (.noteq. AyFeP04 ; A = alkali metal; M = transition metal, $0 < y < 2$) as an active mass. The **batteries** have high discharge voltages and high capacity.
- IT **Battery** cathodes
 (nonaq. electrolyte secondary **batteries** with alkali metal-contg. phosphate cathodes for discharge voltage and capacity)
- IT 13824-63-0, Cobalt lithium phosphate (CoLiP04) . 190436-12-5
 190436-16-9
 RL: DEV (Device component use); USES (Uses)
 (active mass; nonaq. electrolyte secondary **batteries** with alkali metal-contg. phosphate cathodes for discharge voltage and capacity)
- IT 190436-24-9
 RL: DEV (Device component use); USES (Uses)
 (nonaq. electrolyte secondary **batteries** with alkali metal-contg. phosphate cathodes for discharge voltage and capacity)
- L8 ANSWER 5 OF 11 CA COPYRIGHT 2002 ACS
- ACCESSION NUMBER: 126:345317 CA
- TITLE: Phospho-olivines as positive-electrode materials for rechargeable lithium **batteries**
- AUTHOR(S): Padhi, A. K.; Nanjundaswamy, K. S.; Goodenough, J. B.
- CORPORATE SOURCE: Center for Materials Science and Engineering, The University of Texas at Austin, Austin, TX, 78712-1063, USA
- SOURCE: Journal of the Electrochemical Society (1997), 144(4), 1188-1194
 CODEN: JESOAN; ISSN: 0013-4651
- PUBLISHER: Electrochemical Society
- DOCUMENT TYPE: Journal
- LANGUAGE: English
- AB Reversible extn. of lithium from LiFeP04 (triphylite) and insertion of lithium into FeP04 at 3.5 V vs. lithium at 0.05 mA/cm² shows this material to be an excellent candidate for the **cathode** of a low-power, rechargeable lithium **battery** that is inexpensive, nontoxic, and environmentally benign. Electrochem. extn. was limited to .apprx.0.6 Li/formula unit; but even with this restriction the specific capacity is 100 to 110 mAh/g. Complete extn. of lithium was performed chem.; it gave a new phase, FeP04 , isostructural with heterosite, $\text{Fe}_{0.65}\text{Mn}_{0.35}\text{P04}$. The FeP04 framework of the ordered olivine LiFeP04 is retained with minor displacive adjustments. Nevertheless the insertion/extn. reaction proceeds via a two-phase process, and a reversible loss in capacity with increasing c.d. appears to be assocd. with a diffusion-limited transfer of lithium across the two-phase interface. Electrochem. extn. of lithium from isostructural LiMP04 (M = Mn, Co, or Ni) with an LiClO4 electrolyte was not possible; but successful extn. of lithium from $\text{LiFe}_{1-x}\text{Mn}_x\text{P04}$ was accomplished with max. oxidn. of the $\text{Mn}^{3+}/\text{Mn}^{2+}$ occurring at $x = 0.5$. The $\text{Fe}^{3+}/\text{Fe}^{2+}$ couple was oxidized first at 3.5 V followed by oxidn. of the $\text{Mn}^{3+}/\text{Mn}^{2+}$ couple at 4.1 V vs. lithium. The Fe^{3+} -O- Mn^{2+} interactions

appear to destabilize the Mn²⁺ level and stabilize the Fe³⁺ level so as to make the Mn³⁺/Mn²⁺ energy accessible.

- IT Intercalation
(electrochem.; phospho-olivines as pos.-electrode materials for rechargeable lithium batteries)
- IT Secondary batteries
(lithium; phospho-olivines as pos.-electrode materials for rechargeable lithium batteries)
- IT Battery cathodes
(phospho-olivines as pos.-electrode materials for rechargeable lithium batteries)
- IT Intercalation
(retro, electrochem.; phospho-olivines as pos.-electrode materials for rechargeable lithium batteries)
- IT 7439-93-2, Lithium, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(intercalation/deintercalation; phospho-olivines as pos.-electrode materials for rechargeable lithium batteries)
- IT 10045-86-0, Iron phosphate FePO₄ 15365-14-7, Iron lithium phosphate felipo₄
RL: DEV (Device component use); USES (Uses)
(phospho-olivines as pos.-electrode materials for rechargeable lithium batteries)

L8 ANSWER 6 OF 11 CA COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 125:200746 CA
 TITLE: Secondary lithium batteries and their cathodes
 INVENTOR(S): Marumoto, Mitsuhiro; Takada, Yoshinori; Kizu, Kenichi
 PATENT ASSIGNEE(S): Mitsubishi Cable Ind Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08171938	A2	19960702	JP 1994-334030	19941215 <--

AB The batteries have an electrolyte soln. contg. a compd. contg. an element, capable of reacting with Li to form a Li⁺ conducting solid electrolyte, on 1 side of a separator, a cathode contg. that compd. on the electrolyte contg. side of the separator, and an anode coated with the solid electrolyte on the opposite side of the separator. The cathode has an active mass layer contg. the compd. These batteries have long cycle life.

IT Batteries, secondary
(lithium batteries contg. solid electrolyte forming additives in cathodes for cycle life)

IT Cathodes

(battery, cobalt lithium oxide phosphate cathodes contg. additives for forming solid electrolyte with lithium in secondary lithium batteries)

IT 10377-52-3, Lithium phosphate 11104-61-3, Cobalt oxide

13824-63-0, Cobalt lithium phosphate 181215-96-3, Cobalt lithium oxide phosphate

RL: DEV (Device component use); USES (Uses)

(cobalt lithium oxide phosphate cathodes contg. additives for forming solid electrolyte with lithium in secondary lithium batteries)

IT 7439-93-2, Lithium, uses

RL: DEV (Device component use); USES (Uses)

(lithium anodes with in-situ formed lithium phosphate surface layers for secondary batteries)

IT 7558-80-7, Sodium dihydrogen phosphate

RL: MOA (Modifier or additive use); USES (Uses)

(solid electrolyte forming additives in cobalt lithium oxide phosphate cathodes for secondary lithium batteries)

L8 ANSWER 7 OF 11 CA COPYRIGHT 2002 ACS

ACCESSION NUMBER: 123:88488 CA

TITLE: Cathode materials for lithium batteries and their manufacture

INVENTOR(S): Kamauchi, Masahiro; Takada, Yoshinori

PATENT ASSIGNEE(S): Mitsubishi Cable Industries, Ltd., Japan

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9512900	A1	19950511	WO 1993-JP1686	19931117 <--
W: US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 07130357	A2	19950519	JP 1993-297405	19931102 <--
JP 2966261	B2	19991025		
EP 680106	A1	19951102	EP 1994-900277	19931117 <--
R: DE, FR, GB				
US 5614334	A	19970325	US 1995-481257	19950630 <--
PRIORITY APPLN. INFO.:			JP 1993-297405	19931102
			WO 1993-JP1686	19931117

AB The cathode materials comprise an org binder and an active mass; where the active mass is composed of lithium phosphate, lithium cobalt phosphate, cobalt oxide, and/or lithium cobalt oxide and contains .gtoreq.0.1 mol Co and .gtoreq.0.2 mol P/mol Li. The cathode material sheets are prepd. by spreading a soln. of the org. polymer and powd. active mass on a long support sheet and drying it.

- IT Rubber, synthetic
 RL: MOA (Modifier or additive use); USES (Uses)
 (EPDM, binder; compns. and manuf. of **cathode** materials for
 lithium **batteries**)
- IT Cathodes
 (battery, compns. and manuf. of **cathode** materials
 for lithium **batteries**)
- IT 872-50-4, N-Methyl-2-pyrrolidone, uses 9002-84-0, Ptfе 25190-89-0,
 Hexafluoropropylene-tetrafluoroethylene-vinylidene fluoride copolymer
 RL: MOA (Modifier or additive use); USES (Uses)
 (binder; compns. and manuf. of **cathode** materials for lithium
batteries)
- IT 10377-52-3, Lithium phosphate 11104-61-3, Cobalt oxide
13824-63-0, Cobalt lithium phosphate
 RL: DEV (Device component use); USES (Uses)
 (compns. and manuf. of **cathode** materials for lithium
batteries)
- IT 68-12-2, Dmf, uses 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent; compns. and manuf. of **cathode** materials for lithium
batteries)

L8 ANSWER 8 OF 11 CA COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 121:304635 CA
 TITLE: Cathodes for lithium **batteries**
 INVENTOR(S): Kamauchi, Masaharu
 PATENT ASSIGNEE(S): Mitsubishi Cable Ind Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06223832	A2	19940812	JP 1993-27644	19930121 <--
JP 3266353	B2	20020318		
AB The cathodes comprise composites of $\text{Li}_w\text{Co}_1\text{-x-yM}_x\text{PyO}_2\text{+z}$ (M .gtoreq.1 transition metals; $0 < w .ltoreq. 2$; $0 .ltoreq. x < 1$; $0 < y < 1$; - $1 .ltoreq. z .ltoreq. 4$) active material and solid electrolytes. Electrolytic decompn. of electrolytes are prevented even under high voltage load.				
IT Composites (cobalt lithium transition metal phosphorus oxide as solid electrolyte composite cathodes for lithium batteries)				
IT Cathodes (battery, lithium; cobalt lithium transition metal phosphorus oxide as solid electrolyte composite cathodes for lithium batteries)				
IT Electrolytes (solid, cobalt lithium transition metal phosphorus oxide as solid				

electrolyte composite cathodes for lithium **batteries**)
 IT 13824-63-0P, Cobalt lithium phosphate
 RL: DEV (Device component use); PNU (Preparation, unclassified); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cobalt lithium transition metal phosphorus oxide as solid electrolyte
 composite cathodes for lithium **batteries**)
 IT 7791-03-9, Lithium perchlorate 159356-00-0
 RL: DEV (Device component use); TEM (Technical or engineered material
 use); USES (Uses)
 (solid electrolyte; cobalt lithium transition metal phosphorus oxide as
 solid electrolyte composite cathodes for lithium **batteries**)

L8 ANSWER 9 OF 11 CA COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 120:222477 CA
 TITLE: Secondary lithium **battery**
 INVENTOR(S): Kamauchi, Masahiro; Soejima, Hiroshi; Kubota, Shuji;
 Sasaki, Kouzou
 PATENT ASSIGNEE(S): Mitsubishi Cable Industries, Ltd., Japan
 SOURCE: Can. Pat. Appl., 66 pp.
 CODEN: CPXXEB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2096386	AA	19931119	CA 1993-2096386	19930517 <--
JP 06275277	A2	19940930	JP 1993-116240	19930518 <--
US 5538814	A	19960723	US 1995-374998	19950118 <--
US 5705296	A	19980106	US 1995-473973	19950607
PRIORITY APPLN. INFO.:			JP 1992-124594	19920518
			JP 1992-223068	19920821
			JP 1992-258537	19920928
			JP 1992-271944	19921009
			JP 1992-271945	19921009
			JP 1992-271943	19921009
			JP 1992-271947	19921009
			JP 1993-27646	19930121
			US 1993-61240	19930517
			US 1995-374998	19950118

AB The **battery** comprises an anode, an electrolyte, and a
 cathode composed of a cathode active material comprising
 .gtoreq.1 member selected from Li phosphate, Li-Co phosphate, Co oxide,
 and Li-Co oxide, such that the molar ratio of Co:P:Li is >0.1:>0.2:1. The
battery has a high energy d. leading to high discharge capacity,
 high emf., and high discharge voltage, and excellent cycle properties.
 IT Fullerenes
 RL: USES (Uses)
 (anodes, lithium, for efficient **batteries**)
 IT 1307-96-6, Cobalt oxide, uses 1308-04-9, Cobalt oxide 1308-06-1,

Cobalt oxide 10377-52-3, Lithium phosphate 12017-00-4, Cobalt dioxide 13762-75-9, Lithium metaphosphate 13824-63-0, Cobalt lithium phosphate 13843-41-9, Lithium pyrophosphate 15804-33-8, Lithium triphosphate 33943-59-8, Lithium tetraphosphate 52627-24-4, Cobalt lithium oxide

RL: USES (Uses)

(cathodes, for efficient batteries)

L8 ANSWER 10 OF 11 CA COPYRIGHT 2002 ACS

ACCESSION NUMBER: 120:168824 CA

TITLE: Secondary lithium battery

INVENTOR(S): Kamauchi, Masahiro; Soejima, Hiroshi; Kubota, Shuji; Sasaki, Kouzou

PATENT ASSIGNEE(S): Mitsubishi Cable Industries, Ltd., Japan

SOURCE: Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 571858	A1	19931201	EP 1993-108004	19930517 <--
EP 571858	B1	19960814		
R: DE, FR, GB				
JP 06275277	A2	19940930	JP 1993-116240	19930518 <--
US 5538814	A	19960723	US 1995-374998	19950118 <--
US 5705296	A	19980106	US 1995-473973	19950607
PRIORITY APPLN. INFO.:			JP 1992-124594	19920518
			JP 1992-223068	19920821
			JP 1992-258537	19920928
			JP 1992-271943	19921009
			JP 1992-271944	19921009
			JP 1992-271945	19921009
			JP 1992-271947	19921009
			JP 1993-27646	19930121
			US 1993-61240	19930517
			US 1995-374998	19950118

AB The battery has an anode, an electrolyte, and a cathode composed of a cathode active material comprising .gtoreq.1 member selected from the group consisting of Li phosphate, Li-Co phosphate, Co oxide, and Li-Co oxide, such that the Co:P:Li molar ratio is (0.2-1.75):(0.25-1.8):1. The cathode active material is amorphous and has an av. particle size 0.01-20 .mu.m, the Brunauer-Emmett-Teller sp. surface area 1-100 m2/g, and a 25-60% porosity. The invention battery has a high energy d. leading to a high discharge capacity, high emf., and high discharge voltage, and excellent cycle life.

IT Fullerenes

RL: USES (Uses)

- (anode manuf. from, lithium, for **batteries**)
- IT Carbonaceous materials
RL: USES (Uses)
(anodes, lithium, for **batteries**)
- IT **Batteries**, secondary
(lithium, high-performance)
- IT Cathodes
(**battery**, cobalt oxide- and/or cobalt lithium oxide- and/or
cobalt lithium phosphate- and/or lithium phosphate-contg., manuf. of)
- IT 10377-52-3, Lithium phosphate 11104-61-3, Cobalt oxide 12737-30-3,
Cobalt nickel oxide **13824-63-0**, Cobalt lithium phosphate
52627-24-4, Cobalt lithium oxide 153456-60-1
RL: USES (Uses)
(**cathode** active mass contg., manuf. of, for **batteries**
)
- IT 1314-56-3, Phosphorus pentoxide, uses 12057-24-8, Lithium oxide, uses
RL: USES (Uses)
(**cathode** active mass manuf. from powd. mixt. contg.,
amorphous, for **batteries**)

L8 ANSWER 11 OF 11 CA COPYRIGHT 2002 ACS

ACCESSION NUMBER: 119:187378 CA

TITLE: Single surface sealed type carbon dioxide gas sensor
based on a lithium ionic conductor

AUTHOR(S): Imanaka, Nobuhito; Murata, Toshihide; Adachi, Ginya

CORPORATE SOURCE: Fac. Eng., Osaka Univ., Suita, 565, Japan

SOURCE: Denki Kagaku oyobi Kogyo Butsuri Kagaku (1993
, 61(7), 909-10

CODEN: DKOKAZ; ISSN: 0366-9297

DOCUMENT TYPE: Journal

LANGUAGE: English

- AB Two sintered pellets, Li conducting electrolyte (1) $\text{LiTi}_2(\text{PO}_4)_3 + 0.2\text{Li}_3\text{PO}_4$ and oxide ionic conductor $(\text{Bi}_2\text{O}_3)_{0.75}(\text{Y}_2\text{O}_3)_{0.25}$, as a ref. **electrode**, were coupled together, and their side-walls were sealed with an inorg. adhesive agent. The open end of (1) was coated with Li methoxide, and a $\text{Li}_2\text{CO}_3 - \text{Li}_2\text{O}$ layer (embedded a Au net and Pb-wire) was formed by heat-treatment in air. The sensor performance was measured at 650.degree.. The results are discussed in terms of the Nernst equation. Variations in O concn. in gas did not interfere.
- IT Air analysis
Flue gases
Gas analysis
Waste gases
(carbon dioxide detn. in, lithium ionic conductor type sensores for)
- IT Electrolytes
(lithium titanium phosphate-lithium phosphate, for carbon dioxide detn. in air and waste gases and flue gases)
- IT Sensors
(electrochem., solid-state, lithium ionic conductor, for carbon dioxide detn. in air and waste gases and flue gases)
- IT 124-38-9, Carbon dioxide, analysis

RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in air and waste gases and flue gases, lithium ionic
conductor type sensores for)

IT 10377-52-3, Lithium phosphate 110213-39-3, Lithium titanium
phosphate

RL: ANST (Analytical study)
(electrolytes contg., for carbon dioxide detn. in air and waste gases
and flue gases)

IT 150627-47-7

RL: ANST (Analytical study)
(electrolytes, for carbon dioxide detn. in air and waste gases and flue
gases)

IT 11078-74-3, Bismuth yttrium oxide (Bi₃YO₆)

RL: ANST (Analytical study)
(ref. electrodes, for carbon dioxide detn. in air and waste gases and
flue gases)